

# ABSTRACT

A method involves the steps of using a mold having a  
5 core made of a ferromagnetic material, charging a mold cavity  
with a magnet powder, compacting the magnet powder while  
applying an orienting magnetic field according to the  
vertical compacting in horizontal magnetic field process, and  
sintering the compact, thereby producing a radially  
10 anisotropic annular sintered magnet in which the remanence in  
a radial direction of the annulus increases and decreases at  
intervals of  $90^\circ$  in a circumferential direction of the  
annulus, and the remanence in a radial direction over the  
entire circumference of the annulus has a maximum of  
15 0.95-1.60 T and a minimum equal to 50-95% of the maximum. A  
method for preparing an annular multi-pole magnet for a  
permanent magnet motor involves magnetizing the magnet so  
that the boundary between N and S poles is located within the  
range that is centered at the radial direction where the  
20 remanence exhibits the minimum and extends  $\pm 10^\circ$  therefrom in  
a circumferential direction.